

ABSTRACT OF THE DISCLOSURE

An exhaust purifying device is arranged in an exhaust gas passage extending from an internal combustion engine. The exhaust purifying device includes a NO_x trapping catalyst that traps NO_x in the exhaust gas when an exhaust air/fuel ratio is leaner than stoichiometric and releases the trapped NO_x therefrom when the exhaust air/fuel ratio is richer than stoichiometric, and a particulate filter that collects a particulate matter in the exhaust gas. A condition detecting device is arranged to detect a condition of the particulate filter. An exhaust air/fuel ratio control device is arranged to control the exhaust gas from the engine in such a manner that the exhaust gas has a target exhaust air/fuel ratio. When the exhaust air/fuel ratio is changed from a stoichiometric or richer side to a leaner side, the exhaust air/fuel ratio control device varies the exhaust air/fuel ratio under the leaner air/fuel exhaust condition in accordance with the condition of the particulate filter.

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